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U.S. Army Toxic and Hazardous Materials Agency

Report of Sampling and Analysis Results

Manhattan Beach Army Housing Units
Brooklyn, New York

September 1990

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Prepared for:

U.S. ARMY TOXIC AND
HAZARDOUS MATERIALS AGENCY
Aberdeen Proving Ground
Maryland 21010-5401

Prepared by:

WESTON
MANAGERS DESIGNERS CONSULTANTS

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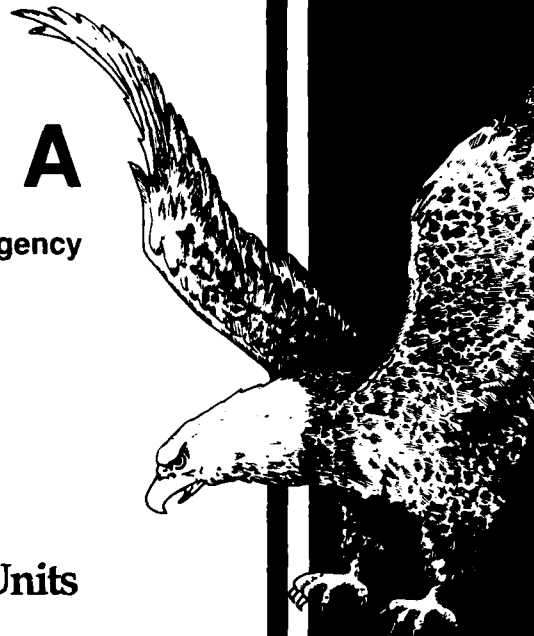
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CETHA-BC-CR-90117

**Report of Sampling and
Analysis Results
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Brooklyn, New York**

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Prepared for:

**U.S. Army Toxic and Hazardous Materials Agency
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REPORT DOCUMENTATION PAGE

Form Approved
 OMB No. 0704-0188

1a. REPORT SECURITY CLASSIFICATION UNCLASSIFIED			1b. RESTRICTIVE MARKINGS		
2a. SECURITY CLASSIFICATION AUTHORITY			3. DISTRIBUTION/AVAILABILITY OF REPORT Distribution Unlimited		
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE					
4. PERFORMING ORGANIZATION REPORT NUMBER(S)			5. MONITORING ORGANIZATION REPORT NUMBER(S) CETHA-BC-CR-90117		
6a. NAME OF PERFORMING ORGANIZATION ROY F. WESTON, INC.	6b. OFFICE SYMBOL (if applicable)	7a. NAME OF MONITORING ORGANIZATION Environmental Assessment & Information Sciences Division Argonne National Laboratory (for USATHAMA)			
6c. ADDRESS (City, State, and ZIP Code) Roy F. Weston, Inc. Weston Way West Chester, PA 19380		7b. ADDRESS (City, State, and ZIP Code) Argonne National Laboratory 9700 S. Cass Avenue Argonne, IL 60439			
8a. NAME OF FUNDING/SPONSORING ORGANIZATION U.S. Army Toxic & Hazardous Materials Agency	8b. OFFICE SYMBOL (if applicable) CETHA-BC	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER U.S. Department of Energy Contract W-31-109-ENG-38			
8c. ADDRESS (City, State, and ZIP Code) U.S. Toxic & Hazardous Materials Agency Attn: CETHA-BC Aberdeen Proving Ground, MD 21010-5401		10. SOURCE OF FUNDING NUMBERS			
		PROGRAM ELEMENT NO.	PROJECT NO.	TASK NO.	WORK UNIT ACCESSION NO.
11. TITLE (Include Security Classification) UNCLASSIFIED Report of Sampling and Analysis Results: Manhattan Beach Army Housing Units Brooklyn, New York					
12. PERSONAL AUTHOR(S)					
13a. TYPE OF REPORT Final	13b. TIME COVERED FROM TO	14. DATE OF REPORT (Year, Month, Day) September 1990		15. PAGE COUNT	
16. SUPPLEMENTARY NOTATION Prepared for the U.S. Army Toxic & Hazardous Materials Agency by Roy F. Weston under a contract from, and the supervision of Argonne National Laboratory					
17. COSATI CODES			18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number)		
FIELD	GROUP	SUB-GROUP			
19. ABSTRACT (Continue on reverse if necessary and identify by block number) Roy F. Weston, Inc. has conducted a sampling and analysis program of the Army housing property located in Brooklyn, New York. The objectives of this effort include further characterization of environmental contamination identified in an enhanced preliminary assessment carried out in 1989. The specific activities performed at this site were identification, evaluation of the condition, and collection of samples from specific suspected asbestos-containing materials, including floor tiles, pipe run and pipe fitting insulation, dust in the ductwork, and exterior siding, where present. These evaluations were necessary to clarify potential environmental issues identified in the earlier report, prior to the sale or realignment of the property.					
20. DISTRIBUTION/AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS			21. ABSTRACT SECURITY CLASSIFICATION UNCLASSIFIED		
22a. NAME OF RESPONSIBLE INDIVIDUAL Joseph Ricci			22b. TELEPHONE (Include Area Code) (301) 671-3461	22c. OFFICE SYMBOL CETHA-BC	

**SAMPLING AND ANALYSIS AT THE U.S. ARMY
FAMILY HOUSING UNIT (FHU) PROPERTY
MANHATTAN BEACH, NEW YORK**

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EXECUTIVE SUMMARY

The U.S. Army family housing units (FHUs) at Manhattan Beach, New York were inspected by Roy F. Weston, Inc. (WESTON) personnel during February and March 1990 to further evaluate the environmental concerns identified in the enhanced Preliminary Assessment reports prepared and submitted earlier by Argonne National Laboratory (ANL) for the U.S. Army Toxic and Hazardous Materials Agency (USATHAMA). Seven of the 72 single-family housing units located in nine 3-story buildings were examined on 22 March to investigate the possible presence of asbestos-containing materials (ACM). The transformers were examined on 26 February to collect samples, if possible, for PCB determination.

The ANL Draft Sampling and Analysis Plan, Revision 0 (SAP) specified identifying and sampling of the following materials, that frequently are suspected to contain asbestos, from ten per cent of the housing units or a minimum of three, whichever is greater.

- Pipe run insulation.
- Vinyl floor tiles.

The WESTON personnel selected seven housing units for inspection after review of maintenance records and drawings, discussions with housing management personnel, and determination that the units were unoccupied and in similar condition. The housing units chosen, Nos. 115A, 121A, 122A, 126A, 132A, 174A, and 174B, were considered to be representative of the other 65 units, but this was not confirmed by an examination of all units.

Twenty-four samples of floor tile and vinyl sheeting and 13 samples of pipe run and fitting insulation were collected by WESTON and analyzed. These analyses revealed that asbestos is present in the vinyl floor coverings and in pipe run insulation at the seven housing units examined. Asbestos was quantified at 1% or greater by polarized light microscopy (PLM) in 18 of the 24 floor coverings samples, and in six samples of the pipe run insulation. Asbestos was qualitatively identified in four other samples of floor coverings by transmission electron microscopy (TEM). Other suspect materials were observed within some of the units. These materials include cementitious board in poor condition separating the mechanical rooms from the crawl spaces, trowelled-on duct insulation in the mechanical rooms and garages, and wall board in all areas of the facilities. Seven samples were collected at the discretion of the field inspectors to determine whether these materials contained asbestos. Five samples of trowelled-on duct insulation, and one sample of cementitious board and wall board were collected. All of these materials were found by PLM to contain no asbestos so they pose no risk of asbestos exposure. During the asbestos sampling activity, no other suspect materials were observed within the units.

The following practices should be observed with regard to the known and suspected asbestos-containing materials identified:

- The most significant risk of asbestos exposure to occupants is presented by the friable asbestos-containing pipe run insulation. All damaged material should be repaired or removed in a planned, properly executed program, as soon as practical. If repairs are made, rather than removal, an

Operations and Maintenance (O&M) program should be developed and implemented. This plan must describe the locations of all known ACM, procedures for its maintenance, repair and removal, and personnel responsible for its implementation. The O&M program must remain in force until such time as all ACM is removed from the facility.

- The vinyl floor coverings pose no significant risk as long as they are in good condition and are not damaged by excessive wear or misuse. The materials should be left in place and managed under and O&M program which describes procedures for the regular inspection of the floor coverings and the removal and replacement of any that become damaged.

Six Army-owned oil-filled transformers were found at the site. Sampling of all units was investigated by the WESTON field team, using a bucket truck. Three of the units had been sampled in the early 1980's, according to the Army Contractor, and they are defined as "PCB-contaminated" by EPA regulations. Examination of the other three units revealed that they were badly rusted. Sampling of these units was not attempted, due to the deteriorated condition of the housing.

All of the transformers are Allis-Chalmers 37.5 KVA units, thought to be about 35 years old. They were manufactured at a time when PCB-containing insulating oils were in near universal use, and probably contain PCBs. Removal and replacement of the three suspect transformers is recommended, followed by sampling of the oils at a location where possible spills during the procedure can easily be contained and corrected. The transformers and oils should be disposed of according to applicable regulations, after the PCB content of the oils is determined.

SECTION 1. INTRODUCTION

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**SAMPLING AND ANALYSIS AT THE U.S. ARMY
FAMILY HOUSING UNIT (FHU) PROPERTY
MANHATTAN BEACH, NEW YORK**

SECTION 1. INTRODUCTION

Roy F. Weston, Inc. (WESTON) was retained by Argonne National Laboratory (ANL) to provide assistance in gathering additional environmental data for the U.S. Army Toxic and Hazardous Materials Agency (USATHAMA) at 53 family housing unit (FHU) properties in 12 states. The Manhattan Beach, New York property is one of these FHUs.

1.1 PURPOSE AND SCOPE

The purpose of this project was to provide the Department of the Army with sound environmental data on the property which is scheduled for sale or realignment as a result of the Defense Authorization Amendments and Base Closure and Realignment Act (Public Law 100-526). Environmental assessments of each property covered by the Act are required by the Secretary of Defense prior to their closure or realignment. Such actions must be performed in accordance with applicable provisions of the National Environmental Policy Act (NEPA) to ensure that any environmental hazards will be identified and mitigated where required.

Previously, ANL conducted enhanced preliminary assessments (PAs) for each property. These PAs made recommendations regarding sampling and analysis to determine (1) whether and in what quantities asbestos is present in certain building construction materials (including pipe run insulation, dust accumulated in heating ductwork, vinyl floor tile, and exterior siding shingles, where present), (2) in selected contexts, whether and in what concentration soils and groundwater may be contaminated, and (3) whether and in what range transformer oils at selected sites may contain polychlorinated biphenyls (PCBs). WESTON gathered this data by implementing Argonne National Laboratory's (ANL's) Draft FHU Sampling and Analysis Plan, Revision 1 (SAP).

1.2 SITE DESCRIPTION

The Manhattan Beach housing area is located near Fort Hamilton, in Kings County on Long Island, New York. The area occupies 4.74 acres and has 72 residential units in nine buildings. Kingsborough College is located adjacent to and east of the housing area. The housing property and surrounding area comprise 70.27 acres, and extends to Sheepshead Bay. At one time this parcel of land was part of the Manhattan Beach Air Force Station. The area surrounding the Manhattan Beach housing facility is predominantly residential.

The Manhattan Beach housing units were constructed in 1939 and consist of nine three-story buildings containing a total of 72 residential units. Two buildings are "attached row-type" design, and house eight families each. Seven buildings are "duplex" design and also house eight families each. The units are warmed by radiant heaters supplied by steam or hot water from central boiler rooms.

The exterior of all seven units are constructed of brick. Renovations to the homes including new roofs, rear steps (steel), kitchen, cabinets, bathrooms, windows, storm doors, and garage doors have been made within the last five years.

1.3 REPORT ORGANIZATION

This report contains the results of the sampling and analysis program performed by WESTON. Section 2 contains a description of the asbestos sampling performed at the property and laboratory results for samples of suspected asbestos-containing material (ACM) collected. Copies of field notes and laboratory results pertaining to asbestos are provided in Appendices A.1 and A.2. Section 3 contains a description of field activities and the findings from the transformer evaluations. Copies of field notes and supporting data for this effort are included in Appendix B. Section 4 is a summation of all activities and findings for the Manhattan Beach FHU.

SECTION 2. ASBESTOS-CONTAINING MATERIALS

SECTION 2. ASBESTOS-CONTAINING MATERIALS

WESTON personnel inspected seven of the 72 units at the Manhattan Beach family housing facility on 22 March 1990 for the presence of suspected ACM. Pipe run and fitting insulation, floor tile and vinyl sheeting, trowelled-on duct insulation, wall board, and cementitious board were the only suspect materials found within the buildings that were sampled. All sampling was done following the requirements of ANL's SAP. Additionally, all field work was performed in accordance with applicable Federal regulations, including 40 CFR Part 61 subpart M, 40 CFR Part 763 subpart E, and 29 CFR Part 1910.1001.

2.1 SAMPLING RATIONALE

The sampling rationale used by WESTON for this project followed the recommendations set forth by ANL in the first version of the SAP (Rev. 0). The type of suspect ACM to be sampled, the number of housing units to be examined at each FHU facility, and number of samples to be taken for each material found were described in the SAP. The plan for Manhattan Beach required sampling of the following materials, if present:

- Pipe run insulation.
- Vinyl floor tiles.

In accordance with the SAP, seven units were examined at this facility. The sampling plan, however, did not identify specific units which were to be sampled. The task of determining which housing units were representative of the facility as a whole and, therefore, would be sampled was left to the WESTON field team. After reviewing all available maintenance records and drawings and discussing the facility with Directorate of Engineering and Housing (DEH) personnel, it was determined that all of the units at the Manhattan Beach FHU were similar in condition. None of the units were occupied. Units 115A, 121A, 122A, 126A, 132A, 174A, and 174B were chosen by the WESTON field team leader as representative units to be sampled.

The SAP specifies that a minimum of two pipe run insulation and fitting samples and one sample of each color of floor tile be collected from each of the housing units examined. Thirteen samples of pipe run and fitting insulation and 24 samples of floor tile and vinyl sheeting were taken at this facility. Additionally, five samples of trowelled-on duct insulation, one sample of wall board, and one sample of cementitious board were collected to determine if asbestos was present in other materials that are suspect.

2.2 FIELD ACTIVITIES AND OBSERVATIONS

Each of the units was inspected to determine if suspect material was present. Samples of the pipe run and fitting insulation were retrieved using disposable coring devices with one-half inch diameter tubes, designed such that the coring devices also serve as the sampling containers. Before the coring tool was inserted, the materials to be sampled were moistened to prevent asbestos fibers from becoming airborne. The coring devices were placed in their outer sample containers and secured by a tight fitting lid. These containers were labeled with sample numbers, and shipped to the lab. The sampling tools were wiped clean with a damp cloth and all debris resulting from the sampling activities was collected and placed into plastic bags. The small bore holes were sealed with an encapsulant.

Twelve samples of pipe run insulation and one sample of pipe fitting insulation were taken in the seven units. This insulation was in poor condition in all units inspected. The pipe run and fitting insulation is friable, as defined in the U.S. Environmental Protection Agency (EPA) regulations, meaning that it can be crushed, crumbled, pulverized, or otherwise reduced to a powder using hand pressure. Friable ACM is considered to be more hazardous than non-friable ACM since it is much more likely to release asbestos fibers that can become airborne. Because of its friability and instances of damage, the pipe run insulation is considered to be the most hazardous type of ACM in the Manhattan Beach FHU.

Six colors, white, gray, yellow, green, light green, and white/brown, of 12" x 12" vinyl floor tile and black 9" x 9" vinyl floor tile were sampled. All units except No. 174A contained gray floor tile. Green tile was found in all units except 115A, 121A, and 174B. Unit 122A contained yellow and white/brown tile. Unit 132A contained light green and black 9" x 9" tile. Unit 174A contained white tile and brown vinyl sheeting. One sample of each of the floor tile and vinyl sheeting was taken in each housing unit, resulting in a total of 24 samples for laboratory determination of asbestos content. These samples were collected by breaking off a small piece of floor covering in an inconspicuous location. About one square inch of the tile surface area was taken for each sample. No effort was made to separate the mastic, which sometimes contains asbestos, from the floor tile samples themselves.

The vinyl floor tile in all three of the units inspected was in good condition. This material is considered to be a non-friable type of ACM, unless damaged. If significant damage occurs, such that the material becomes friable as defined in the asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP), the U.S. Environmental Protection Agency (EPA) would classify these tiles as friable materials. However, an EPA interpretation was recently released that changes certain previous interpretations regarding non-friable ACM. On 23 February 1990, a memorandum was issued by the Director Emissions Standards Division, the Director of Stationary Source Compliance Division, and the Associate Enforcement Counsel for Air Enforcement of the EPA Office of Air Quality regional offices in early March 1990. This latest position states that floor tiles and certain other non-friable materials do not have to be removed from a facility prior to demolition, unless they are severely damaged and thus are considered friable, or unless the demolition may cause fiber release through grinding or abrasion of the tiles. Floor tile removal shall be done if demolition is to be accomplished by burning, either of the unit or of the debris from demolition. However, if the floors in the housing units are to be renovated, special care must be taken during the process to prevent the release of asbestos fibers.

The WESTON field team was directed, as a part of the project scope contained in the SAP, to perform sampling and analysis of specific suspect ACM. Suspect materials sampled were cementitious board, wall board, and trowelled-on-duct insulation as described earlier. No other suspect materials were observed. Copies of the field notes are included in Appendix A.1.

2.3 LABORATORY PROCEDURES AND RESULTS

The bulk samples of building materials were analyzed for asbestos content by WESTON's optical microscopy laboratory in Auburn, Alabama. This laboratory is accredited by the American Industrial Hygiene Association (AIHA) and the National Institute of Standards and Technology (NIST) under the National Voluntary Laboratory Accreditation Program (NVLAP). The bulk samples were analyzed by Polarized Light Microscopy (PLM) using the "Interim Method for the Determination of Asbestos in Bulk Insulation Samples", EPA 600/M4-82-020, December 1982. Copies of the laboratory reports are included in Appendix A.2.

Vinyl floor covering samples for which no asbestos was found using PLM methods were analyzed qualitatively for the presence of asbestos by Transmission Electron Microscopy (TEM) at WESTON's NVLAP accredited electron microscopy laboratory in Auburn, Alabama. Copies of these laboratory reports are also included in Appendix A.2.

All analyses were performed in accordance with protocols set forth in the Laboratory Accreditation package submitted by WESTON under NVLAP. This document includes standard procedures for sample analysis and quality assurance/quality control (QA/QC) which were acceptable to NIST. The QA/QC protocols for the laboratory differ significantly from those commonly found in chemical analysis procedures, due to the nature of the analytical procedure. Since there are no reagents, digestions, or other steps in the process that provide significant opportunities for sample contamination or analyte loss, lot blanks and sample spikes are not performed. Instead, all analyses are performed using the following steps:

- Incoming samples are divided into lots of ten for analysis.
- One sample is selected at random to serve as the QC check and divided into two containers.
- The sample lot is assigned to an analyst who determines the asbestos content of each sample.
- The QC sample is analyzed by a different analyst, designated by the sample custodian.
- The results of both analysts are submitted to the QC Coordinator for review, and comparison to the laboratory QC chart.
- The results are reviewed and approved, based on the written QC review procedures, or rejected. If rejected, the sample lot and QC sample are reanalyzed.

The WESTON laboratory routinely runs blank checks to ensure that equipment and refractive index oils are not contaminated, collects and analyzes samples of the air in the work areas to document that airborne asbestos fibers do not threaten worker health or contaminate samples, and analyzes samples submitted by NIST to document precision of results as required by the NVLAP program. Samples provided in past rounds of proficiency checks are used for analyst training and to document analyst proficiency. The use of third party laboratory comparisons is often done, and is accomplished by sending duplicates of samples to an outside laboratory and comparing the results obtained by the two facilities.

In interpreting the asbestos results, it should be noted that the definition of asbestos presence differs between the EPA and some state agencies. According to the EPA definition, any materials that contain greater than one per cent (>1%) asbestos are classified as ACM by the 1977 NESHAP regulations. However, California has recently implemented state regulations that consider all materials containing 0.1 per cent or more asbestos as asbestos-containing. It is believed that several other states will soon follow the lead of California in lowering the threshold limit to 0.1 per cent, including some in which properties under review in this study are located. Currently, the State of New York continues to abide by the EPA definition, hence, all samples containing >1% asbestos are considered to be ACM.

The matter is further complicated by the fact that the PLM method was developed specifically for friable materials, but not for non-friable types of suspect ACM such as vinyl floor tiles, vinyl sheeting, and siding. In fact, no specific method has been developed and promulgated to date for such samples, so laboratories use PLM as the only available documented procedure for their analysis. PLM has an inherent limitation on fiber resolution of about 0.25 micrometer (um) in diameter while reliable detection and quantification of fibers smaller than 1 um in diameter is difficult. The manufacturing process for vinyl floor tiles, for example, often produces the very small fiber diameters which cannot be seen by PLM. WESTON's experience is that frequently such samples do, in fact, contain significant quantities of asbestos. WESTON has developed a qualitative technique using TEM to detect the presence of such small fibers and minimize false negatives in the laboratory results. This technique, however, does not allow a good quantitative estimate of asbestos content.

For these reasons, the WESTON laboratories have implemented a policy of reporting asbestos presence as follows:

- Asbestos determined by PLM to be present at greater than 1% is reported as the quantity detected.
- If asbestos is estimated to be less than 1% by PLM, it is reported as <1%. This estimate of asbestos content may be made when only one asbestos structure is observed.
- If asbestos is not detected in certain non-friable materials by PLM, then the samples are subjected to TEM analysis. The results are reported as positive if asbestos is detected by TEM.

Recommendations made in this report are based on the >1% regulatory limit, except for floor tiles as discussed earlier and except as otherwise noted. However, all samples in which asbestos is observed are discussed. This represents a conservative approach to the assessment of asbestos presence at the facility.

Table 2.1 contains a summary of all samples collected at the Manhattan Beach FHU, including sample locations, material descriptions, and laboratory results. PLM results are quantitative while TEM results are qualitative. Quantity estimates for materials sampled that were suspected to contain asbestos are presented in Table 2.2. The field notes describing the observations are provided in Appendix A.1, while copies of the original laboratory reports are included as Appendix A.2.

Six of the 13 samples of pipe run and fitting insulation were found by PLM to contain the chrysotile type of asbestos in a friable form at concentrations ranging from 10% to 55%. Based on these observations, the pipe run insulation should be considered to contain asbestos.

Eighteen of the 24 floor covering samples were found by PLM to contain asbestos at or greater than the 1% level. WESTON considers the 1% value reported for ten of these samples to be sufficient to define the samples as asbestos-containing due to the analytical uncertainty of the PLM method when applied to floor tiles, as described previously. Four of the samples, for which no asbestos was reported following PLM analysis, were found to contain asbestos fibers by the TEM procedure. While this results is qualitative in nature, consideration of the process through which floor tiles were manufactured leads to the conclusion that this material should be treated as ACM. Two samples were found to contain no detectable asbestos by both

TABLE 2.1
BULK SAMPLE SUMMARY
MANHATTAN BEACH FAMILY HOUSING

SAMPLE IDENTIFICATION	MATERIAL TYPE	LOCATION	ASBESTOS CONTENT PCM ANALYSIS	CONFIRMATION TEM ANALYSIS
=====				
Unit 115A -----				
BY342-02-NY-115A-AFT	Gray 12" x 12" floor tile	Kitchen/Hall	Chrysotile, 4%	
BY343-02-NY-115A-API	Pipe run insulation	Mech room/Crawl space	Chrysotile, 30%	
BY344-02-NY-115A-API	Pipe run insulation	Oil storage room	None Detected	
Unit 121A -----				
BY345-02-NY-121A-AFT	Gray 12" x 12" floor tile	Kitchen/Hall	Chrysotile, 1%	
BY346-02-NY-121A-AFT	Gray 12" x 12" floor tile	Kitchen/Hall	Chrysotile, 7%	
BY347-02-NY-121A-AFT	Gray 12" x 12" floor tile	Kitchen	None Detected	Positive
BY348-02-NY-121A	Trowel-on duct insulation	Garage	None Detected	
BY349-02-NY-121A	Cementitious board	Mech room	None Detected	
BY350-02-NY-121A-API	Pipe run insulation	Mech room	Chrysotile, 35%	
BY351-02-NY-121A-API	Pipe fitting insulation	Mech room	None Detected	
BY352-02-NY-121A-API	Pipe run insulation	Oil storage room	None Detected	
Unit 122A -----				
BY353-02-NY-122A-AFT	Gray 12" x 12" floor tile	Kitchen	Chrysotile, 2%	
BY354-02-NY-122A-AFT	Yellow 12" x 12" floor tile	Kitchen	Chrysotile, 8%	
BY355-02-NY-122A-AFT	White/brown 12" x 12" floor tile	Kitchen	None Detected	Positive
BY356-02-NY-122A-AFT	Green 12" x 12" floor tile	Living room/Bedrooms/Hall	Chrysotile, 1%	
BU610-02-NY-122A	Trowel-on insulation	Boiler room	None Detected	
BU611-02-NY-122A-API	Pipe run insulation	Mech room	Chrysotile, 55%	
BU612-02-NY-122A-API	Pipe run insulation	Oil storage room	None Detected	
Unit 126A -----				
BY357-02-NY-126A-AFT	Green 12" x 12" floor tile	Hall closet/Living room/ Bedrooms/Halls	Chrysotile, 1%	
BY358-02-NY-126A-AFT	Gray 12" x 12" floor tile	Kitchen closet	Chrysotile, 1%	
BY359-02-NY-126A-AFT	Gray 12" x 12" floor tile	Kitchen closet	Chrysotile, 1%	
BY360-02-NY-126A-AFT	Gray 12" x 12" floor tile	Kitchen	None Detected	Positive
BY361-02-NY-126A-AFT	Gray 12" x 12" floor tile	Kitchen	Chrysotile, 2%	
BY362-02-NY-126A-AFT	Green floor tile	Halls/Closets/Bedrooms/ Living room	None Detected	Negative
BU576-02-NY-126A	Trowel-on insulation	Boiler room	None Detected	
BU577-02-NY-126A-API	Pipe run insulation	Boiler room/Crawl space	Chrysotile, 45%	
BU578-02-NY-126A-API	Pipe run insulation	Oil storage room/ Crawl space	None Detected	

TABLE 2.1
BULK SAMPLE SUMMARY
MANHATTAN BEACH FAMILY HOUSING

SAMPLE IDENTIFICATION	MATERIAL TYPE	LOCATION	ASBESTOS CONTENT PCM ANALYSIS	CONFIRMATION TEM ANALYSIS
=====				
Unit 132A				

BY363-02-NY-132A-AFT	Gray 12" x 12" floor tile	Kitchen	Chrysotile, 2%	
BY364-02-NY-132A-AFT	Gray 12" x 12" floor tile	Kitchen	Chrysotile, 1%	
BY365-02-NY-132A-AFT	Black 9" x 9" floor tile	Kitchen	Chrysotile, 1%	
BY366-02-NY-132A-AFT	Green 12" x 12" floor tile	Bedroom/Hall/Living room	Chrysotile, 1%	
BY367-02-NY-132A-AFT	Lt green 12" x 12" floor tile	Bedroom	Chrysotile, 1%	
BU579-02-NY-132A-API	Pipe run insulation	Boiler room/Crawl space	Chrysotile, 10%	
BU580-02-NY-132A	Trowel-on insulation	Boiler room	None Detected	
BU581-02-NY-132A-API	Pipe run insulation	Oil storage room	None Detected	
Unit 174A				

BY368-02-NY-174A-AFT	White 12" x 12" floor tile	Kitchen	Chrysotile, 2%	
BY369-02-NY-174A-AFT	Brown vinyl sheeting	Kitchen	None Detected	Negative
BY370-02-NY-174A-AFT	Green 12" x 12" floor tile	Kitchen/Living room/Hall/ Bedrooms/Closets	Chrysotile, 1%	
BY371-02-NY-174A-AFT	Green 12" x 12" floor tile	Bedrooms/Living room	None Detected	Positive
BU582-02-NY-174A-API	Pipe run insulation	Mech room/Crawl space	Chrysotile, 40%	
BU583-02-NY-174A	Trowel-on insulation	Mech room	None Detected	
BU584-02-NY-174A-API	Pipe run insulation	Oil storage room	None Detected	
Unit 174B				

BU613-02-NY-174B-AFT	Gray 12" x 12" floor tile	Kitchen	Chrysotile, 5%	
BU585-02-NY-174B	Wall board	All rooms	None Detected	

TABLE 2.2
ASBESTOS CONTAINING MATERIALS
MANHATTAN BEACH FAMILY HOUSING

SAMPLE IDENTIFICATION	MATERIAL TYPE	LOCATION	QUANTITY	UNITS
=====				
Unit 115A -----				
BY342-02-NY-115A-AFT	Gray 12" x 12" floor tile	Kitchen/Hall	192	Square ft
BY343-02-NY-115A-API	Pipe run insulation	Mech room/Crawl space	65	Linear ft
Unit 121A -----				
BY345-02-NY-121A-AFT	Gray 12" x 12" floor tile	Kitchen/Hall	190	Square ft
BY346-02-NY-121A-AFT	Gray 12" x 12" floor tile	Kitchen/Hall	190	Square ft
BY347-02-NY-121A-AFT	Gray 12" x 12" floor tile	Kitchen	30	Square ft
BY350-02-NY-121A-API	Pipe run insulation	Mech room	2	Linear ft
Unit 122A -----				
BY353-02-NY-122A-AFT	Gray 12" x 12" floor tile	Kitchen	200	Square ft
BY354-02-NY-122A-AFT	Yellow 12" x 12" floor tile	Kitchen	200	Square ft
BY355-02-NY-122A-AFT	White/brown 12" x 12" floor tile	Kitchen	200	Square ft
BY356-02-NY-122A-AFT	Green 12" x 12" floor tile	Living room/Bedrooms/Hall	463	Square ft
BU611-02-NY-122A-API	Pipe run insulation	Mech room	8	Linear ft
Unit 126A -----				
BY357-02-NY-126A-AFT	Green 12" x 12" floor tile	Hall closet/Living room/ Bedrooms/Halls	400	Square ft
BY358-02-NY-126A-AFT	Gray 12" x 12" floor tile	Kitchen closet	30	Square ft
BY359-02-NY-126A-AFT	Gray 12" x 12" floor tile	Kitchen closet	240	Square ft
BY360-02-NY-126A-AFT	Gray 12" x 12" floor tile	Kitchen	200	Square ft
BY361-02-NY-126A-AFT	Gray 12" x 12" floor tile	Kitchen	200	Square ft
BU577-02-NY-126A-API	Pipe run insulation	Boiler room/Crawl space	65	Linear ft
Unit 132A -----				
BY363-02-NY-132A-AFT	Gray 12" x 12" floor tile	Kitchen	230	Square ft
BY364-02-NY-132A-AFT	Gray 12" x 12" floor tile	Kitchen	230	Square ft
BY365-02-NY-132A-AFT	Black 9" x 9" floor tile	Kitchen	230	Square ft
BY366-02-NY-132A-AFT	Green 12" x 12" floor tile	Bedroom/Hall/Living room	500	Square ft
BY367-02-NY-132A-AFT	Lt green 12" x 12" floor tile	Bedroom	100	Square ft
BU579-02-NY-132A-API	Pipe run insulation	Boiler room/Crawl space	12	Linear ft

TABLE 2.2
ASBESTOS CONTAINING MATERIALS
MANHATTAN BEACH FAMILY HOUSING

SAMPLE IDENTIFICATION	MATERIAL TYPE	LOCATION	QUANTITY	UNITS
=====				
Unit 174A				

BY368-02-NY-174A-AFT	White 12" x 12" floor tile	Kitchen	220	Square ft
BY370-02-NY-174A-AFT	Green 12" x 12" floor tile	Kitchen/Living room/Hall/ Bedrooms/Closets	420	Square ft
BY371-02-NY-174A-AFT	Green 12" x 12" floor tile	Bedrooms/Living room	100	Square ft
BU582-02-NY-174A-API	Pipe run insulation	Mech room/Crawl space	85	Linear ft
Unit 174B				

9U613-02-NY-174B-AFT	Gray 12" x 12" floor tile	Kitchen	190	Square ft

PLM and TEM. Thus 22 of the 24 floor covering samples were found to contain asbestos. The 65 units not inspected should be considered to have ACM present in the floor coverings unless additional sampling and analysis is performed and confirms that no asbestos is present in these units.

The five samples of trowelled-on duct insulation, one sample of wall board, and one sample on cementitious board were found to contain no asbestos by PLM.

2.4 CONCLUSIONS AND RECOMMENDATIONS

The sample analyses performed by WESTON have revealed that asbestos is present in pipe run insulation and in the vinyl floor coverings in the seven units examined. These units are thought to be representative of the other 65 at the site, but this was not confirmed by an examination of all the units.

Analytical results of the pipe run insulation confirmed that asbestos is present in all of the samples taken of pipe run insulation in the boiler rooms. This insulation should be remediated in those units where asbestos-containing pipe run insulation is damaged by repairing damaged areas and encapsulating the friable materials, or by complete removal, prior to realignment. If repairs are made, rather than removal, an Operations and Maintenance (O&M) program should be developed and implemented. An O&M program must address the following:

- The locations of all known and suspected ACM.
- The procedures and frequency for periodically assessing the ACM in the facility.
- The procedures for safely handling the ACM during maintenance or removal activities.
- Designation of an asbestos coordinator for the facility.
- The responsibilities and requirements for training of personnel involved with maintenance and renovation of the facility.
- The record-keeping program for the facility.

All of the asbestos-containing pipe run insulation must be removed prior to a planned renovation of the plumbing system or demolition of the units.

The vinyl floor covering in the seven housing units inspected were in good condition, but, should they become broken or damaged, asbestos fibers may be released. The recent EPA clarification of the definition for damaged non-friable materials apparently removes some concerns about the status of these materials at the time of renovation or demolition. Inspection of these normally non-friable materials prior to demolition is required, but, if they are in good condition at the time, they may be left in place as long as planned demolition procedures will not release a significant amount of asbestos fibers. However, if demolition will subject these non-friable materials to grinding, sanding, or abrading, or if demolition involves burning of the structure or debris from the structure, all forms of ACM, including these floor tiles, must be removed in advance.

The vinyl floor coverings should be left in place and managed under an O&M plan until they must be removed during a planned renovation of the units or another activity that may disturb them. The vinyl floor coverings should then be removed in accordance with regulations applicable at the time.

Other suspect materials noted and sampled, including cementitious board and trowelled-on insulation in the mechanical rooms and wall board, were found to contain no asbestos. Although no other suspect materials were noted, care should be taken during renovations or demolition to identify suspect materials that may have been hidden from the view of the assessment team. The suspect materials observed by the field team, and any hidden suspect materials found later, should be analyzed for the presence of asbestos prior to being disturbed.

SECTION 3. TRANSFORMER OILS

SECTION 3. TRANSFORMER OILS

WESTON personnel conducted a site visit at the Manhattan Beach facility on 26 February 1990 to evaluate the potential use of polychlorinated biphenyls (PCBs) in mixtures serving as insulating oils in the existing transformers serving the facility. Following inspection of several properties where the condition of the transformers was poor, a protocol was developed to address problems that were being encountered during this activity. Due to the age and deteriorated condition of many of the transformers, collection of samples, in some cases, posed an undue risk of causing environmental damage or exacerbating any that may already exist. If the transformers could not be sampled safely, in the judgement of the field team leader, or if the ownership of the units was in question, the planned sample collection was abandoned and any observations made by the field team were documented.

3.1 SAMPLING RATIONALE

Electrical transformers are often filled with a dielectric liquid which increases the resistance of the unit to arcing and also acts as a heat transfer medium to cool the coils. Many transformers are filled with a chlorinated fire-resistant fluid which meets the definition established in the National Electrical Code for "askarel", the generic name for non-flammable insulating liquids used in transformers. Prior to 1979, transformer askarel typically contained 60 to 100% PCBs. Askarel transformers were made in a variety of sizes containing from three to 3,000 gallons of PCB liquid.

Three types of transformers are defined in the regulations:

- PCB Transformer: Any transformer containing 500 ppm or greater PCBs.
- PCB-Contaminated Transformer: Any transformer containing 50-499 ppm PCBs.
- Non-PCB Transformer: Any transformer containing less than 50 ppm PCBs.

Sampling of transformers is conducted to verify which of these three categories of transformers are present. Depending upon the category determined, certain regulatory requirements including recordkeeping, marking, storage, and disposal must be satisfied.

In general, the sampling protocol followed by WESTON for this project was outlined in ANL's SAP. The plan identified sites where unlabeled, Army-owned transformers were thought to be present. The types, sizes, and precise locations of the transformers were not identified in the plan. Local utility company assistance was needed to identify ownership of the transformers and to provide services necessary to de-energize the high power lines prior to sampling. The objective of this task was to sample all Army-owned transformers serving the facility. However, it was agreed that if the sampling team determined that a spill that may result in environmental damage could occur due to the intrusive effort involved, sampling was not to be attempted. In such cases, name plate information and a general description of the transformer would be obtained. The following list presents potential conditions where sampling activities would not be attempted:

- Transformers are rusted and/or in very poor condition.
- Certain transformer hardware is in poor condition (i.e. drain valves, stopcocks, lid fastening bolts etc.)

- Transformers appear to be in good condition, but access is thwarted by bolts, wing nuts etc. that are "rusted shut".
- Transformer and/or transformer mounting pole ownership is questionable or is other than the U.S. Army.

3.2 SAMPLING METHODOLOGY AND OBSERVATIONS

Mr. Kevin Fulmer and Mr. Rick Evans of WESTON conducted the transformer evaluation activities. Mr. Tom Freeman, the DEH contact, and three personnel from the local utility contractor were present for support and to deenergize the high power lines. Three Basil-Trataros (BT) employees, under contract with the Army, had been sent to the site to de-energize the high-voltage power lines and provide assistance needed. Six transformers were found which supplied electrical power to the FHU property. They were mounted in two groups of three devices, one group, which appeared older, mounted on a utility pole located at the entrance gate and the others similarly mounted to a pole on Quentin Street. Mr. Wayne Baker of BT confirmed that these six transformers were owned by the Army. He also stated that he personally had sampled the three transformers located along Quentin Street in the early 1980's and they had been determined to be PCB-contaminated. WESTON requested information from the DEH office at Fort Hamilton but no records could be located to support the recollection.

The WESTON field team examined the transformers located at the entrance gate and found that they were in poor condition. Extensive patches of rust were noted and the field team determined that they could not be sampled without a risk of creating a spill. The name-plate information was obtained by the sampling team and is as follows:

Manufacturer:	Allis Chalmers
KVA Rating:	37.5 KVA
Style Number:	1812297 (one unit)

All six of the transformers at the facility appeared to be of an identical type, but they were clearly in different states of preservation.

3.3 CONCLUSIONS AND RECOMMENDATIONS

The six transformers located in two banks of three transformers each were determined to belong to the U.S. Army, according to DEH contractor personnel. The physical condition of three devices appeared to be sound, to the extent that sampling of the transformer oils had been done in the past and the transformers classified as PCB-contaminated, according to BT personnel. These three transformers are not subject to the labeling and inspection requirements set forth in 40 CFR part 761. However, their ultimate disposal is restricted by these regulations. No further action regarding these three transformers appears to be necessary at this time, although a thorough search of DEH and subcontractor records for the laboratory data supporting the PCB content is necessary. If documentation of these results cannot be located, the transformer oils should be resampled and the PCB content confirmed. The three older transformers were in poor condition as indicated by the formation of rust on the cases. The field team determined that these devices could not be safely sampled while in place. They should be assumed to belong to the PCB-transformer category, based on

their age, until a determination to the contrary is made. It appears that an appropriate response action, due to the condition of the housings, is to replace these three units with newer transformers that do not contain PCB's and move them to a staging area where they can be opened safely and sampled. A proper area should be capable of containing any oils that may be spilled during the opening and sampling of the transformers until the residues can be cleaned up satisfactorily.

SECTION 4. SUMMARY OF FINDINGS

SECTION 4. SUMMARY OF FINDINGS

Sampling and analyses performed at the Manhattan Beach, New York FHU reveal the presence of issues of concern from an environmental standpoint. These include the presence of asbestos in 18 samples of floor tile, the detection of asbestos in all samples of pipe run insulation from the boiler rooms, and the presence of transformers that may contain PCB's.

The friable asbestos-containing pipe insulation found in the boiler rooms of these FHU buildings presents the greatest concern. These materials are damaged and may release asbestos fibers to the air if they are mishandled. All damaged areas should be repaired and the insulation enclosed or encapsulated in a planned, properly executed program following EPA and state regulations. An O&M program should be developed and implemented and must remain in force until such time as all ACM is removed from the facilities.

The vinyl floor coverings pose no significant risk as long as they are in good condition and are not damaged by excessive wear or misuse. They should be left in place and managed under an O&M program which describes procedures for the regular inspection of the floor coverings and the removal and replacement of any that become damaged, until they are eventually removed.

Investigation of the electrical supply system at the property revealed that all six transformers located on the property which may contain polychlorinated biphenyls (PCBs) are owned by the U.S. Army. The transformers are about 35 years old and range from fair to poor condition. Sampling was not attempted from three units due to their deteriorated conditions. The other three units were sampled in the early 1980's and determined to be PCB-contaminated, according to the contractor retained by the local DEH office. The three newer units appear sound and pose little threat of environmental damage, based on recollections of the BT representative. However, no laboratory results were found to confirm this. The three older units should be removed and replaced, to allow sampling of the oils for PCBs in an environmentally safe manner.

APPENDIX A.1. FIELD DATA
ASBESTOS ASSESSMENT

L:\1595M\BEACH.RPT

SITE SURVEY LOG

CLIENT Argonne National Labs WESTON WORK ORDER NO. 2104-13-01
 FACILITY, BLDG. NO. MANHATTAN BEACH FHV, NY(02), UNIT # 115A
 FACILITY CONTACT RISORTO, FRANK TELEPHONE NUMBER (718) 630-4741
 TECHNICIAN NAME ARTHUR BUSBY SIGNATURE Arthur Busby
 TECHNICIAN NAME CHRIS NORRIS SIGNATURE Chris Norris
 TIME ARRIVED 11:00 TIME DEPARTED 11:45 DATE 22 MAR 90
 dd mm yy

SPECIFIC SITE ACTIVITIES, COMMENTS, INTERVIEW RESULTS & BRIEF DESCRIPTION OF FACILITY

We met Mr. Risorto at the Manhattan Beach FHV at 1100 and began our survey of the facility. The facility was built in 1939 and appears to have had minor changes since that date to the water and heating systems. The heating systems in all of these units are steam or hot water radiators heated by a oil furnace in a mechanical room behind and below the Garage area. There were not any heating vents to take samples from, nor were there ever any in the units. All of the units we looked at were vacant and had water damage inside of each unit. Most of the units had peeling paint on the walls and ceilings and most of the units had loose tiles in places where water had loosened them. There are crawl spaces under all of the unit "A's". Water supply^{pipe} for the hot and cold water system and the heating system are located in this area. Some of the pipes in the crawlspaces had some insulation that was generally in poor condition and there was

(Cont.)

ACTIVITY CHECKLIST

Interviews Completed <u>✓</u>	Number of Samples <u>3</u>
Drawings Reviewed <u>N/A</u>	Survey Form Completed <u>✓</u>
Drawings Attached <u>✓</u>	Site Log Completed <u>✓</u>
Visual Inspection <u>✓</u>	Chain-of-Custody Initiated <u>✓</u>
Number of Photos <u>2</u>	Exp. Assess. Form Init. <u>✓</u>
Q.A. Check <u>✓</u>	SIGNATURE <u>Michael Skofnicki</u> DATE <u>26 MAR 90</u> dd mm yy

SITE SURVEY LOG

(Continued)

some debris in the crawl spaces. All of the units examined had a Boiler or Mechanical Room that was covered on the inside walls with some sort of trowel on material (cementitious). Most of the units had a transite board wall between the Mech room and the crawl space and the transite was in poor condition. Transite was not sampled, but noted. There is some sort of structure that was built above the furnace in each boiler room that appears to have been built after the houses were built that covers the pipes to the bathrooms. Most of these structures are falling apart from water damage and may have ACM. There is a vent pipe on the ceilings of all the garages that supplies fresh air to the Mech room. The vent pipe is covered with some sort of either trowel on material or spray material to make the pipe air tight, but this material is damaged. The exterior of the buildings is covered with brick and the roofs have asphalt shingles.

The original structures had hard wood floors that have been covered with floortile. The majority of kitchen floors have many layers of tile.

There are some pipes in the oil tank rooms that are covered with a cementitious insulation that is in poor condition and there is debris on the ground under the pipes, samples and photos were taken.

ASBESTOS SURVEY DATA

0531

BLDG. NO.: 11154
INSTALLATION 01012

TASK TEAM MEMBERS
ARTHUR BUSBY
CHRIS MORRIS

W.O. No. 2104-13-01
CLIENT: ARGONNE NATIONAL LAB

BLDG. NAME: Manhattan Beach 115A
BLDG. DESCRIPTION: 2-Bedroom FHU

DATE (dd/mm/yy): 22/MAR/90
TIME ARRIVED: 1100

ITEM NO.	LAB SAMPLE NO.	BASE NO.	STATE	UNIT NO.	SAMPLE CODE	AREA	QUANTITY	PHOTO	E.A. FORM NO.	NOTES
1.	<u>BY342-012-VIY-1115A-AFIT</u>					<u>GRAY TILE IN KITCHEN & HALL</u>	<u>192</u>		<u>111011A</u>	<u>01</u>
2.	<u>BY343-012-VIY-1115A-API</u>					<u>4x10" AIRCELL PIPE IN ROOM (Mech Rm)</u>	<u>165</u>	✓	<u>111011B</u>	<u>02</u>
3.	<u>BY344-012-VIY-1115A-API</u>					<u>54" PIPE IN ROOM & DEBRIS</u>	<u>120</u>	✓	<u>111011C</u>	<u>03</u>
4.	<u>1111-1-1-1-1-A1</u>					<u>OIL STORAGE AREA ROOM</u>	<u>111</u>		<u>1111</u>	<u>1</u>
5.	<u>1111-1-1-1-1-A1</u>						<u>111</u>		<u>1111</u>	<u>1</u>
6.	<u>1111-1-1-1-1-A1</u>						<u>111</u>		<u>1111</u>	<u>1</u>
7.	<u>1111-1-1-1-1-A1</u>						<u>111</u>		<u>1111</u>	<u>1</u>
8.	<u>1111-1-1-1-1-A1</u>						<u>111</u>		<u>1111</u>	<u>1</u>
9.	<u>1111-1-1-1-1-A1</u>						<u>111</u>		<u>1111</u>	<u>1</u>
10.	<u>1111-1-1-1-1-A1</u>						<u>111</u>		<u>1111</u>	<u>1</u>
11.	<u>1111-1-1-1-1-A1</u>						<u>111</u>		<u>1111</u>	<u>1</u>
12.	<u>1111-1-1-1-1-A1</u>						<u>111</u>		<u>1111</u>	<u>1</u>

NOTE NO.	NOTES/REMARKS/COMMENTS/DETAILS/OTHER MATERIALS, QUANTITY, ETC.
<u>01</u>	<u>12x12" GRAY Floor Tile IN KITCHEN & ENTRANCE HALL</u>
<u>02</u>	<u>AirCell Pipe INSULATION IN Boiler Room and crawl space under house is in poor condition and there is some Debris under the pipes.</u>
<u>03</u>	<u>Cementitious Pipe Run has deteriorated and is falling apart and has created some debris, but there is some still on the pipes too. (oil storage Room)</u>
	<u>There is some transit about 4 square feet in the Mech room, (Boiler-Rm.)</u>

TECHNICIAN SIGNATURE Arthur Busby

QUALITY ASSURANCE SIGNATURE Michael Skofnicki

SITE SURVEY LOG

CLIENT Argonne National Labs WESTON WORK ORDER NO. 2104-13-01
 FACILITY/BLDG. NO. 121A MANHATTAN BEACH, NY. FHU # 002
 FACILITY CONTACT FRANK RISORTO TELEPHONE NUMBER (718) 630-4741
 TECHNICIAN NAME ARTHUR BUSBY SIGNATURE Arthur Busby
 TECHNICIAN NAME CHRIS NORRIS SIGNATURE Chris Norris
 TIME ARRIVED 1145 TIME DEPARTED 1223 DATE 22 MAR 90
 dd mm yy

SPECIFIC SITE ACTIVITIES, COMMENTS, INTERVIEW RESULTS & BRIEF DESCRIPTION OF FACILITY

There was a lot of water damage in this unit and there is water leaking in the crawl-space under the house. There is a lot of material in the mech room that is in poor condition that may be ACM. (see photo). Transub in mech room is damaged.

Several layers of floor tile in kitchen

This unit is vacant. There is pipe run in the crawlspace leading from the mech room and oil room that is badly damaged.

ACTIVITY CHECKLIST

Interviews Completed <u>✓</u>	Number of Samples <u>8</u>
Drawings Reviewed <u>N/A</u>	Survey Form Completed <u>✓</u>
Drawings Attached <u>✓</u>	Site Log Completed <u>✓</u>
Visual Inspection <u>✓</u>	Chain-of-Custody Initiated <u>✓</u>
Number of Photos <u>3</u>	Exp. Assess. Form Init. <u>✓</u>
Q.A. Check <u>✓</u>	SIGNATURE <u>Michael Skotnicki</u> DATE <u>26 MAR 90</u> dd mm yy

ASBESTOS SURVEY DATA

0535

BLDG. NO.: 1121A
INSTALLATION 10012

TASK TEAM MEMBERS
ARTHUR BUSBY
CHRIS NORRIS

W.O. No. 2104-13-01
CLIENT: ARGONNE NATIONAL LAB

BLDG. NAME: MANHATTEN BEACH, NY
BLDG. DESCRIPTION: One - Bedroom FHU

DATE (dd/mm/yy): 22/MAR/90
TIME ARRIVED: 1145

ITEM NO.	LAB SAMPLE NO.	BASE NO.	STATE	UNIT NO.	SAMPLE CODE	AREA	QUANTITY	PHOTO	E.A. FORM NO.	NOTES
1.	BY345	012	NY	AFIT ^{121A}	AFIT	KITCHEN	1190		11021A	01
2.	BY346	012	NY	AFIT ^{121A}	AFIT	KITCHEN	1190		11021A	02
3.	BY347	012	NY	AFIT ^{121A}	AFIT	KITCHEN	30		11021A	03
4.	BY348	012	NY	AFIT ^{121A}	AFIT ^{AFIT}	GARAGE	16		11021B	04
5.	BY349	012	NY	AFIT ^{121A}	AFIT ^{AFIT}	MEDIA ROOM	15	✓	11021B	05
6.	BY350	012	NY	AFIT ^{121A}	AFIT ^{AFIT}	MEDIA ROOM	12	✓	11021C	06
7.	BY351	012	NY	AFIT ^{121A}	AFIT ^{AFIT}	MEDIA ROOM	11		11021C	07
8.	BY352	012	NY	AFIT ^{121A}	AFIT ^{AFIT}	OIL ISITORAISIE ROOM	16	✓	11021C	08
9.	_____	_____	NY	_____	AI	_____	_____	_____	_____	_____
10.	_____	_____	_____	_____	AI	_____	_____	_____	_____	_____
11.	_____	_____	_____	_____	AI	_____	_____	_____	_____	_____
12.	_____	_____	_____	_____	AI	_____	_____	_____	_____	_____

22/MAR/50

ATS 22/MAR/90

NOTE NO.	NOTES/REMARKS/COMMENTS/DETAILS/OTHER MATERIALS, QUANTITY, ETC.
01	Gray 12x12 floor tile under BY346
02	Gray 12x12 floor tile
03	Gray 12x12 patch tile in Kitchen new and installed
04	a couple of months ago
05	Transite? board on ceiling above furnace
06	Poor condition
	Air Cell pipe insulation, Poor, damage, debris
	Transite board by furnace, did not sample
	4 square feet damaged, Poor
07	Pipe Fitting Material
08	Pipe Insulation in Oil Room is a Cementitious material
	In Poor Condition

TECHNICIAN SIGNATURE Arthur Busby

QUALITY ASSURANCE SIGNATURE Michael Skotnicki

SITE SURVEY LOG

CLIENT Argonne National Labs WESTON WORK ORDER NO. 2104-13-01
 FACILITY BLDG. NO. 122A MANHATTAN BEACH, NY (#002)
 FACILITY CONTACT FRANK RISORTO TELEPHONE NUMBER (718) 630-4741
 TECHNICIAN NAME ARTHUR BUSBY SIGNATURE Arthur Busby
 TECHNICIAN NAME CHRIS NORRIS SIGNATURE Chris Norris
 TIME ARRIVED 1225 TIME DEPARTED 1246 DATE 22 MAR 90
 dd mm yy

SPECIFIC SITE ACTIVITIES, COMMENTS, INTERVIEW RESULTS & BRIEF DESCRIPTION OF FACILITY

This unit is vacant and has had some water damage to the ceilings and walls.

Some of the floor tile is loose and broken. There is some transite board near the furnace in the mechanical room that has been broken.

Pipe runs in the crawlspace leading from the meechroom to the oil storage room are in poor condition and there is some debris on the floor under the pipes.

ACTIVITY CHECKLIST

Interviews Completed <u>✓</u>	Number of Samples <u>7</u>
Drawings Reviewed <u>N/A</u>	Survey Form Completed <u>✓</u>
Drawings Attached <u>✓</u>	Site Log Completed <u>✓</u>
Visual Inspection <u>✓</u>	Chain-of-Custody Initiated <u>✓</u>
Number of Photos <u>2</u>	Exp. Assess. Form Init. <u>✓</u>
Q.A. Check <u>✓</u>	SIGNATURE <u>Michael Skotnicki</u> DATE <u>26 MAR 90</u> dd mm yy

ASBESTOS SURVEY DATA

0539

BLDG. NO.: 1122A
INSTALLATION 1002

TASK TEAM MEMBERS
ARTHUR BUSBY
CHRIS NORRIS

W.O. No. 2104-13-01
CLIENT: ARGONNE NATIONAL LAB

BLDG. NAME: MANHATTAN BEACH FHU #122A

DATE (dd/mm/yy): 22 MAR/90

BLDG. DESCRIPTION: One-Bedroom Unit

TIME ARRIVED: L 2 2 5

ITEM NO.	LAB SAMPLE NO.	BASE NO.	STATE	UNIT NO.	SAMPLE CODE	AREA	QUANTITY	PHOTO	E.A. FORM NO.	NOTES
1.	B1Y353-012-MY-1122A				AFIT	KILITCHEN UNDER 1355	1200		111031A	01
2.	B1Y354-012-MY-1122A				AFIT	KILITCHEN UNDER 13531355	1200		111031A	02
3.	B1Y355-012-MY-1122A				AFIT	KILITCHEN	1200		111031A	03
4.	B1Y356-012-MY-1122A				AFIT	ALL ROOMS LVR, BIR, HALL	#63		111031A	04
5.	BUG110-012-MY-1122A				ALL	BOILER ROOM	150		111031B	05
6.	BUG11-012-MY-1122A				AFIT	4-3" PIPE RUW Mech Rm	118	✓	111031C	06
7.	BUG12-012-MY-1122A				AFIT	RUW OIL STORAGE RM	117	✓	111031C	07
8.	- - - - -				ALL					
9.	- - - - -				ALL					
10.	- - - - -				ALL					
11.	- - - - -				ALL					
12.	- - - - -				ALL					

NOTE NO.	NOTES/REMARKS/COMMENTS/DETAILS/OTHER MATERIALS, QUANTITY, ETC.
01	Gray 12x12 Good cond.
02	Yellow 12x12
03	12x12 with pattern (white & Brown)
04	12x12 Green Living Room, Halls, Bedrooms
05	All over boiler room, travel or spray material
06	Pipe Run fair Cond.
07	Transite board noted in boiler Room 4 f- clay like material, some debris as well in the oil storage Room.

TECHNICIAN
SIGNATURE

Arthur Busby

QUALITY ASSURANCE
SIGNATURE

Michael Skofnick

SITE SURVEY LOG

CLIENT Argonne National Labs WESTON WORK ORDER NO. 2104-13-01
 FACILITY/BLDG. NO. 126A MANHATTAN BEACH FHU (#02)
 FACILITY CONTACT FRANK RISORTO TELEPHONE NUMBER (719) 630-4741
 TECHNICIAN NAME ARTHUR BUSBY SIGNATURE Arthur Busby
 TECHNICIAN NAME CHRIS NORRIS SIGNATURE Chris Norris
 TIME ARRIVED 1249 TIME DEPARTED 1310 DATE 22 MAR 90
 dd mm yy

SPECIFIC SITE ACTIVITIES, COMMENTS, INTERVIEW RESULTS & BRIEF DESCRIPTION OF FACILITY

This unit was vacant when we surveyed it. There has been some water damage to the walls and ceilings and a few floor tiles are loose.

The pipe runs in the crawlspace were damaged in some places and there was some debris under the pipes.

There was not any transite in the mech room and the cementitious material on the walls and ceilings were in good condition.

ACTIVITY CHECKLIST

Interviews Completed <u>✓</u>	Number of Samples <u>9</u>
Drawings Reviewed <u>N/A</u>	Survey Form Completed <u>✓</u>
Drawings Attached <u>✓</u>	Site Log Completed <u>✓</u>
Visual Inspection <u>✓</u>	Chain-of-Custody Initiated <u>✓</u>
Number of Photos <u>2</u>	Exp. Assess. Form Init. <u>✓</u>
Q.A. Check <u>✓</u>	SIGNATURE <u>Michael Skofnicki</u> DATE <u>26 MAR 90</u> dd mm yy

ASBESTOS SURVEY DATA

0513

BLDG. NO.: 1126A
INSTALLATION 0102

TASK TEAM MEMBERS
ARTHUR BUSBY
CHRIS NORRIS

W.O. No. 2104-13-01
CLIENT: ARGONNE NATIONAL LAB

BLDG. NAME: MANHATTAN BEACH FHU 126A
BLDG. DESCRIPTION: two-Bedroom Apt.

DATE (dd/mm/yy): 22/MAR/90
TIME ARRIVED: 1249

ITEM NO.	LAB SAMPLE NO.	BASE NO.	STATE	UNIT NO.	SAMPLE CODE	AREA	QUANTITY	PHOTO	E.A. FORM NO.	NOTES
1.	B1Y3157	-012	-NY	-11216A	-AFIT	HALL CL. GILDISSET	1400		111014A	011
2.	B1Y3158	-012	-NY	-11216A	-AFIT	KITCHEN KILDISSET	130		111014A	012
3.	B1Y3159	-012	-NY	-11216A	-AFIT	KITCHEN KILDISSET	1240		111014A	013
4.	B1Y3160	-012	-NY	-11216A	-AFIT	KITCHEN	200		111014A	014
5.	B1Y3161	-012	-NY	-11216A	-AFIT	KITCHEN UNDER 360	200		111014A	015
6.	B1Y3162	-012	-NY	-11216A	-AFIT	HALL	100		111014A	016
7.	B1Y3176	-012	-NY	-11216A	-AFIT	Boiler Room Trowel mat	1120		111014B	017
8.	B1Y3177	-012	-NY	-11216A	-AFIT	4-8" Pipe Run in Boiler Room and Crawl space	165	✓	111014C	018
9.	B1Y3178	-012	-NY	-11216A	-AFIT	4" Pipe Run in Oil Storage Room	118	✓	111014C	019
10.		-	-	-	-					1
11.		-	-	-	-					1
12.		-	-	-	-					1

NOTE NO.	NOTES/REMARKS/COMMENTS/DETAILS/OTHER MATERIALS, QUANTITY, ETC.
01	Green 12x12 Tile Living room, Bed Rooms, Halls
02	Kitchen closet Gray 12x12
03	Gray 12x12 under 358 & 360
04	Gray 12x12
05	Gray 12x12 under 360 in Kitchen
06	Green patch tile in closets, Halls, Living Room and Bed Rooms
07	Trowel on material on walls and ceiling of Boiler Rm.
08	4-8" Pipe Run in Boiler Rm and Crawl space
09	4" Pipe Run in Oil Storage Room and Crawl space
	No Transite Some Debris

TECHNICIAN SIGNATURE Arthur Busby

QUALITY ASSURANCE SIGNATURE Michael Skofnicka

0515

SITE SURVEY LOG

CLIENT Argonne National Labs WESTON WORK ORDER NO. 2104-13-01
 FACILITY/BLDG. NO. 132A MANHATTAN BEACH FHU #02
 FACILITY CONTACT FRANK RISORTO TELEPHONE NUMBER (718) 630-4741
 TECHNICIAN NAME ARTHUR BUSBY SIGNATURE Arthur Busby
 TECHNICIAN NAME CHRIS NORRIS SIGNATURE Chi Norris
 TIME ARRIVED 1312 TIME DEPARTED 1330 DATE 22 MAR 90
 dd mm yy

SPECIFIC SITE ACTIVITIES, COMMENTS, INTERVIEW RESULTS & BRIEF DESCRIPTION OF FACILITY

This unit was vacant when we surveyed it.
The kitchen had many layers of floor tile but
they are in fair to good condition.

There is transit board, travel on material
and pipe run in the crawl space and
mech room. All of these materials show
some kind of damage and there is pipe
insulation debris under the pipes.

ACTIVITY CHECKLIST

Interviews Completed <u>✓</u>	Number of Samples <u>8</u>
Drawings Reviewed <u>N/A</u>	Survey Form Completed <u>✓</u>
Drawings Attached <u>✓</u>	Site Log Completed <u>✓</u>
Visual Inspection <u>✓</u>	Chain-of-Custody Initiated <u>✓</u>
Number of Photos <u>2</u>	Exp. Assess. Form Init. <u>✓</u>
Q.A. Check <u>✓</u>	SIGNATURE <u>Michael Skofnicki</u> DATE <u>26/MAR/90</u> dd mm yy

SITE SURVEY LOG

CLIENT Argonne National Labs WESTON WORK ORDER NO. 2104-13-01
 FACILITY/BLDG. NO. 174A
 FACILITY CONTACT FRANK RISORTO TELEPHONE NUMBER (718) 630-4741
 TECHNICIAN NAME ARTHUR BUSBY SIGNATURE Arthur Busby
 TECHNICIAN NAME CHRIS NORRIS SIGNATURE Chris Norris
 TIME ARRIVED 1332 TIME DEPARTED 1350 DATE 22 MAR 90
 dd mm yy

SPECIFIC SITE ACTIVITIES, COMMENTS, INTERVIEW RESULTS & BRIEF DESCRIPTION OF FACILITY

This unit was vacant when we surveyed it.
There is water damage to the walls and
ceilings and the paint and plaster is falling
off.

There are several layers of floor tile in the
kitchen and they are in good to fair condition.

The pipe runs in the mech room, crawlspace
and oil storage room are in poor condition and
there is some debris under the pipes where some
insulation has fallen off.

There is trash or material on the walls and
ceiling of the mech room and some on the
air vent leading from the mech room through
the garage. No trash was noted in
this building.

ACTIVITY CHECKLIST

Interviews Completed <u>✓</u>	Number of Samples <u>7</u>
Drawings Reviewed <u>N/A</u>	Survey Form Completed <u>✓</u>
Drawings Attached <u>✓</u>	Site Log Completed <u>✓</u>
Visual Inspection <u>✓</u>	Chain-of-Custody Initiated <u>✓</u>
Number of Photos <u>2</u>	Exp. Assess. Form Init. <u>✓</u>
Q.A. Check <u>✓</u>	SIGNATURE <u>Michael Skotnicki</u> DATE <u>26 MAR 90</u> dd mm yy

ASBESTOS SURVEY DATA

0551

BLDG. NO.: 1174A
INSTALLATION 01012

TASK TEAM MEMBERS
ARTHUR BUCKY
CHRIS NORRIS

W.O. No. 2104-13-01
CLIENT: ARGONNE NATIONAL LAB

BLDG. NAME: MANHATTAN BEACH (FHU #02) Apt 174A
BLDG. DESCRIPTION: two - Bedroom Apt.

DATE (dd/mm/yy): 22 MAR 90
TIME ARRIVED: 1332

ITEM NO.	LAB SAMPLE NO.	BASE NO.	STATE	UNIT NO.	SAMPLE CODE	AREA	QUANTITY	PHOTO	E.A. FORM NO.	NOTES
1.	B1Y3168	012	NY	1174A	AFIT	KITCHEN	1220		111061A	01
2.	B1Y3169	012	NY	1174A	AFIT	KITCHEN	1220		111061A	02
3.	B1Y3170	012	NY	1174A	AFIT	KITCHEN, LIVING ROOM, BED, HALL	1420		111061A	03
4.	B1Y3171	012	NY	1174A	AFIT	LIVING, BED	1100		111061A	04
5.	B1Y582	012	NY	1174A	API	4-18" RUM MECH ROOM	185		111061B	05
6.	B1Y583	012	NY	1174A	API	MECH ROOM, TROWEL	1110		111061C	06
7.	B1Y584	012	NY	1174A	API	OIL ROOM, 4-18" CEM. RUM	114		111061B	07
8.					API					
9.					API					
10.					API					
11.					API					
12.					API					

NOTE NO.	NOTES/REMARKS/COMMENTS/DETAILS/OTHER MATERIALS, QUANTITY, ETC.
01	white 12x12 tile in Kitchen
02	Brown Vinyl sheet flooring under white and Green tile in Kitchen
03	12x12 Green tile in Kitchen closet, Living room, Bedrooms, Halls, closets
04	Green 12x12 Patch in Living Room & Bedrooms
05	Pipe run in Mech room and crawl space in fair to poor condition with some Debris
06	Trowel on material in Mech room on walls and ceiling and some pipes
07	Cementitious pipe run in oil storage room in poor condition with some damage and debris
	B1Y584 a lot of Debris

TECHNICIAN SIGNATURE Arthur Bucky

QUALITY ASSURANCE SIGNATURE Michael Skotnicki

SITE SURVEY LOG

CLIENT Argonne National Labs WESTON WORK ORDER NO. 2104-13-01
 FACILITY/BLDG. NO. 174B MANHATTAN BEACH, NY #002
 FACILITY CONTACT FRANK RISORTO TELEPHONE NUMBER (718) 630-4741
 TECHNICIAN NAME ARTHUR BUSBY SIGNATURE Arthur Busby
 TECHNICIAN NAME CHRIS NORRIS SIGNATURE Chris Norris
 TIME ARRIVED 1353 TIME DEPARTED 14 10 DATE 22 MAR 90
 dd mm yy

SPECIFIC SITE ACTIVITIES, COMMENTS, INTERVIEW RESULTS & BRIEF DESCRIPTION OF FACILITY

This unit was vacant when survey was performed.

There is a lot of water damage to the ceiling and walls and big chunks of plaster have fallen from the walls. Some of the wall material was sampled to determine if it was ACM.

This unit uses the same Mech room as 174A.

The only suspect material was floor tile in the kitchen.

ACTIVITY CHECKLIST

Interviews Completed <u>✓</u>	Number of Samples <u>2</u>
Drawings Reviewed <u>N/A</u>	Survey Form Completed <u>✓</u>
Drawings Attached <u>✓</u>	Site Log Completed <u>✓</u>
Visual Inspection <u>✓</u>	Chain-of-Custody Initiated <u>✓</u>
Number of Photos <u>0 Mes</u>	Exp. Assess. Form Init. <u>✓</u>
Q.A. Check <u>✓</u>	SIGNATURE <u>Michael Skofnicki</u> DATE <u>26 MAR 90</u> dd mm yy

ASBESTOS SURVEY DATA

0555

BLDG. NO.: 1174B
INSTALLATION 01012

TASK TEAM MEMBERS
ARTHUR BUSBY
CHRIS NORRIS

W.O. No. 2104-13-01
CLIENT: ARGONNE NATIONAL LAB

BLDG. NAME: MANHATTAN BEACH FHU (002)
BLDG. DESCRIPTION: Two-Bed room Apt.

DATE (dd/mm/yy): 22/MAR/90
TIME ARRIVED: 1353

ITEM NO.	LAB SAMPLE NO.	BASE NO.	STATE	UNIT NO.	SAMPLE CODE	AREA	QUANTITY	PHOTO	E.A. FORM NO.	NOTES
1.	B14613-012-MY-1174B-AFI					KITCHEN	1190		11107A	C
2.	B15185-012-MY-1174B-AI					HALLWAY	20010		11107B	C
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										
11.										
12.										

NOTE NO.	NOTES/REMARKS/COMMENTS/DETAILS/OTHER MATERIALS, QUANTITY, ETC.
01	Gray 12x12 some damage,
02	All walls in all units, walls falling apart from water damage material dates from the late 30's
	All other Unit 174B uses the same
	Mech Room as 174A

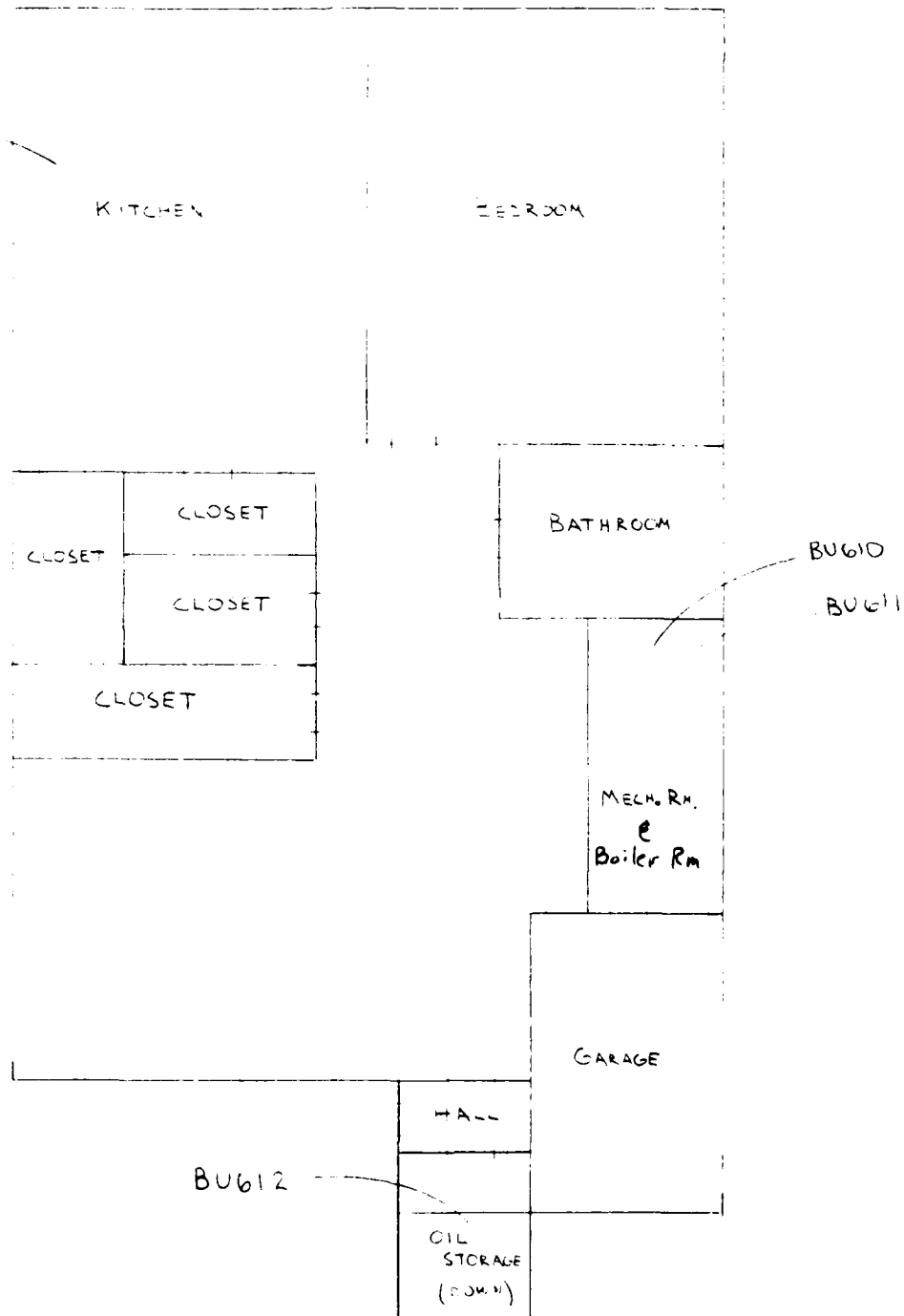
TECHNICIAN SIGNATURE Arthur Busby

QUALITY ASSURANCE SIGNATURE Michael Skotnicki

UNIT 122A
MANHATTEN BEACH FHU



BY 353
BY 354
BY 355



UNIT 132A
MANHATTEN BEACH FHU



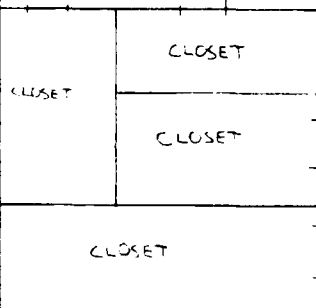
BY 367

BEDROOM

KITCHEN

BY 303
BY 304
BY 305

BY 366



BATHROOM

BU 579

- BU 580

MECH. RM.
&
Boiler Rm.

GARAGE

HALL

BU 581

OIL
STORAGE
DOWN)

UNIT 21A
MANHATTEN BEACH FHU

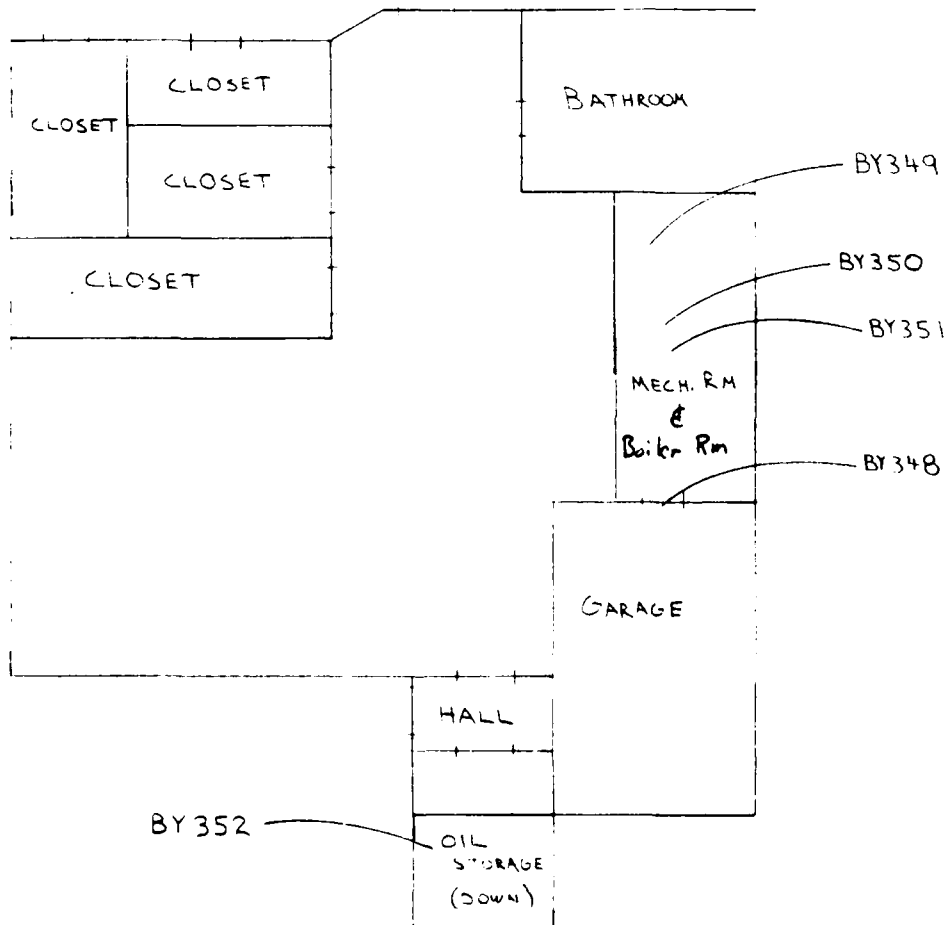
BY347



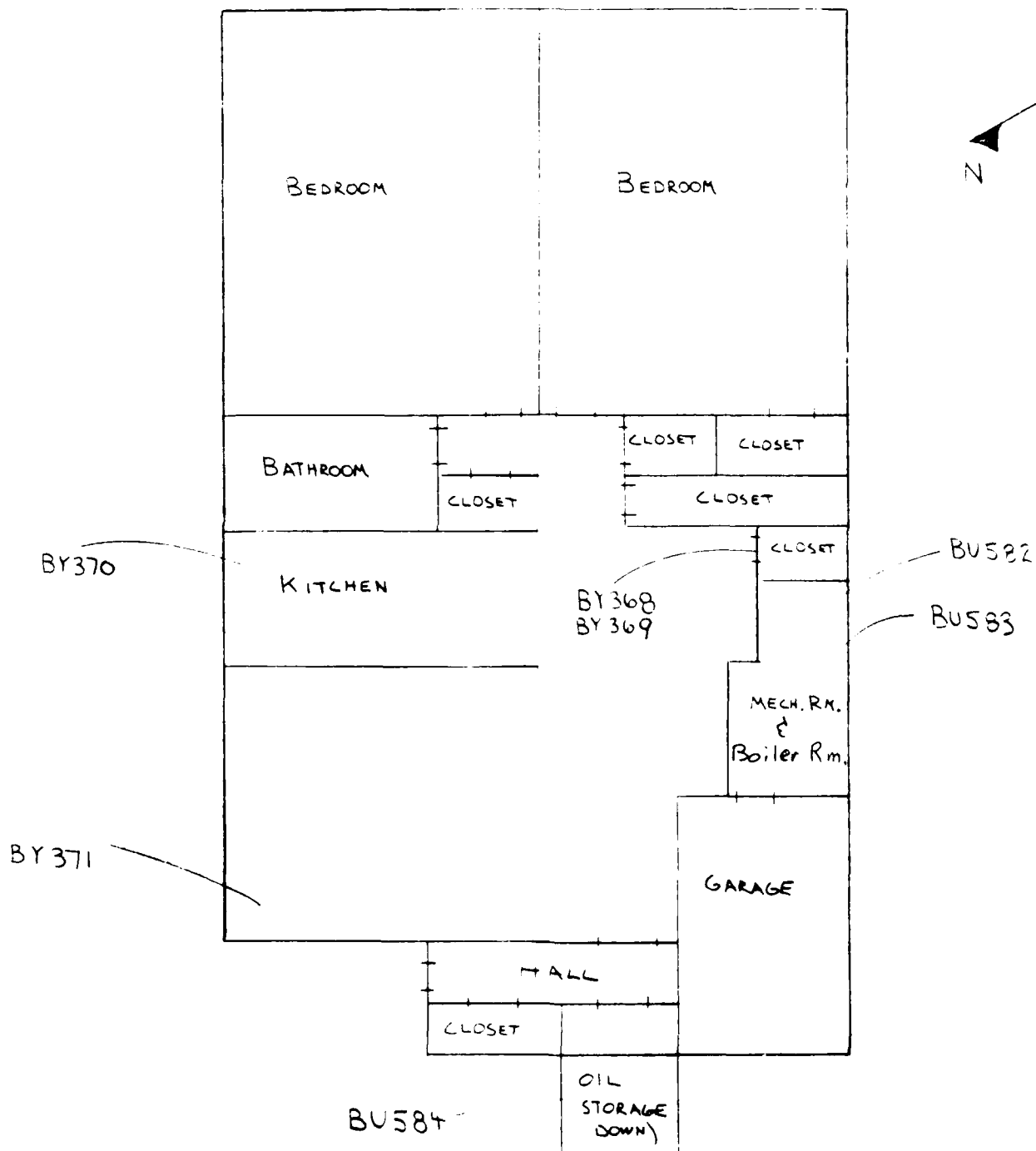
BEDROOM

KITCHEN

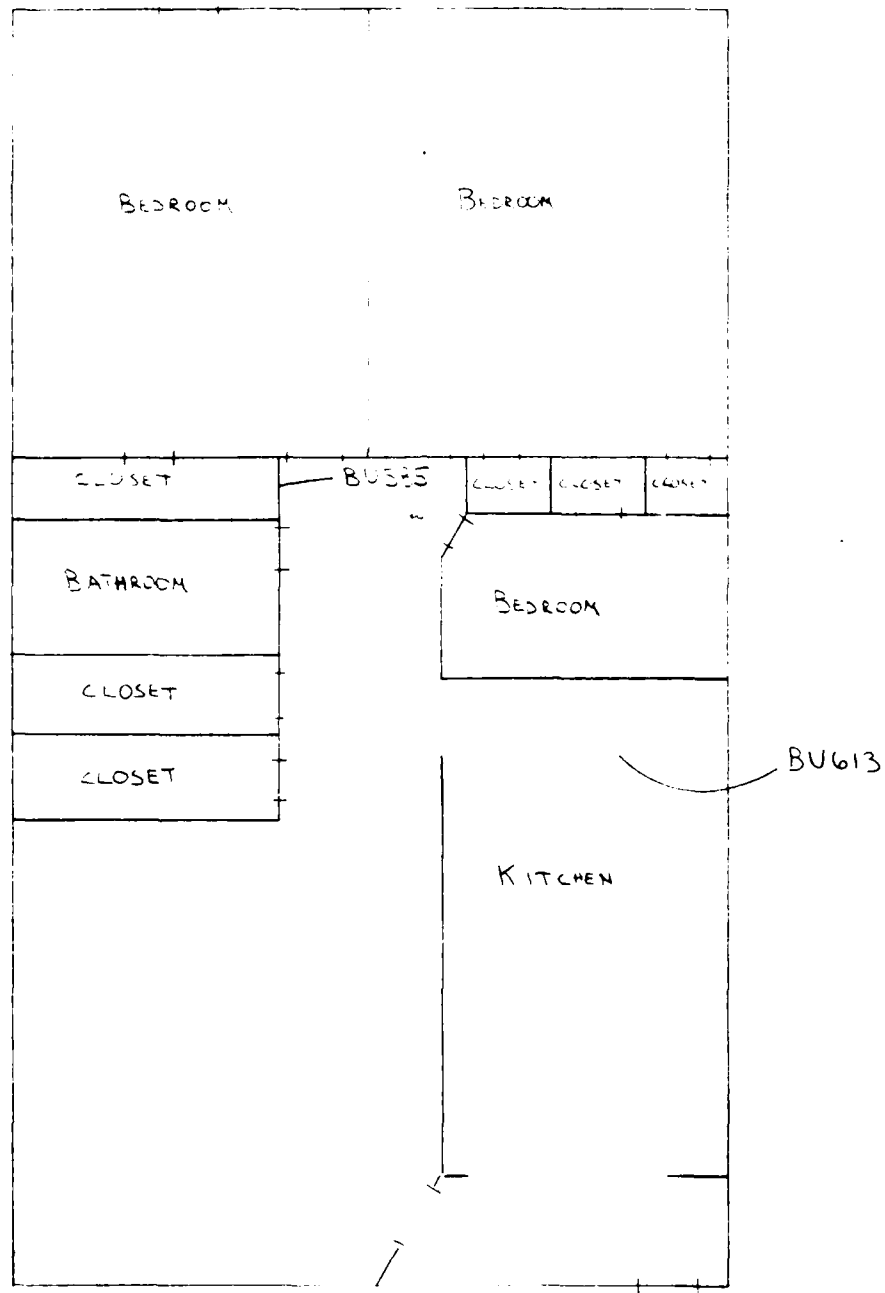
BY345
BY346



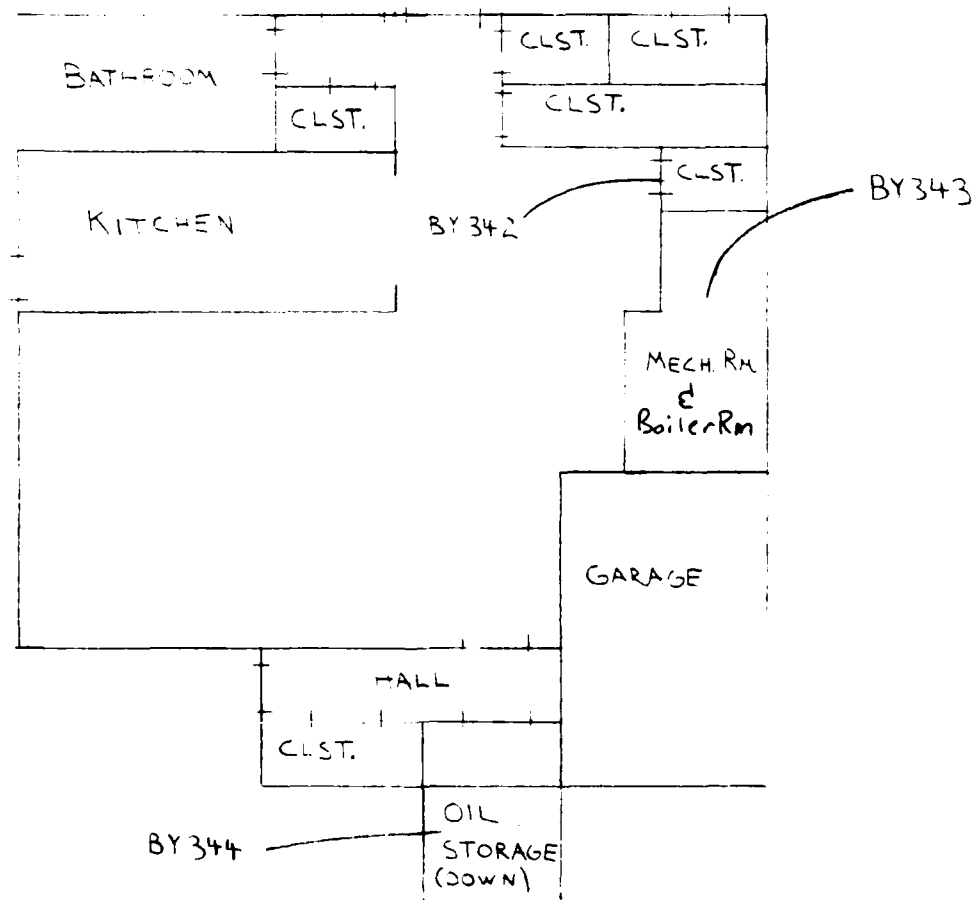
UNIT 174A
MANHATTEN BEACH FHU



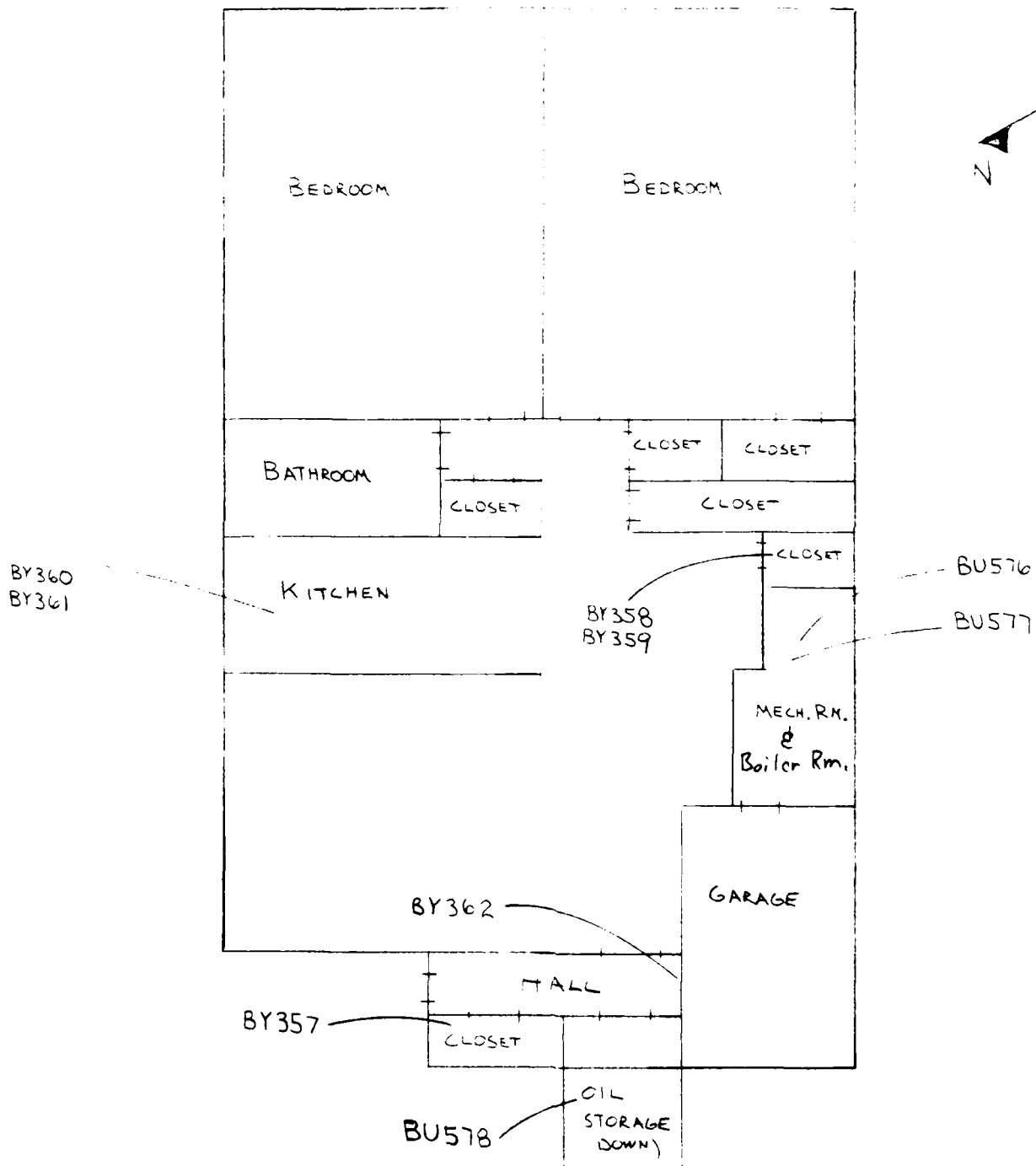
UNIT 1743
MANHATTEN BEACH FHV



LEED ROOM



UNIT 126A
MANHATTEN BEACH FHU



APPENDIX A.2. LABORATORY DATA
ASBESTOS ASSESSMENT

LAI595M-BEACH.RPT

BULK SAMPLE ANALYSIS SUMMARY

Weston W.O. No. 2104-13-01-0001

Receipt Date 03/23/90 through 03/23/90

AO LAB ID NO	CLIENT/CLIENT ID	LOCATION	MATERIAL DESCRIPTION *	DATE RECEIVED	RESULTS **					LAYERS	ANALYST
					CH	AM	CR	OT	TL		
BU576	02-NY-126-A	BOILER	F, TROWEL	03/23/90	ND	ND	ND	ND	ND	No	06806
BU577	02-NY-126-API	BOILER	F, PIPE RN	03/23/90	45	ND	ND	ND	45	Yes	06806
BU578	02-NY-126-API		F, PIPE RN	03/23/90	ND	ND	ND	ND	ND	No	06806
BU579	02-NY-132-API	MECHRM	F, PIPE RN	03/23/90	10	ND	ND	ND	10	Yes	06806
BU580	02-NY-132-A	MECHRM	F, TROWEL	03/23/90	ND	ND	ND	ND	ND	No	06806
BU581	02-NY-132-API	OIL RM	F, PIPE RN	03/23/90	ND	ND	ND	ND	ND	No	07323
BU582	02-NY-174-API	MECHRM	F, PIPE RN	03/23/90	40	ND	ND	ND	40	No	07323
BU583	02-NY-174-A	MECHRM	F, TROWEL	03/23/90	ND	ND	ND	ND	ND	Yes	07323
BU584	02-NY-174-API	OIL RM	F, PIPE RN	03/23/90	ND	ND	ND	ND	ND	No	07323
BU585	02-NY-174-A	HALL	F, WALL BRD	03/23/90	ND	ND	ND	ND	ND	Yes	07323
BU610	02-NY-122-A	BOILER	F, TROWEL	03/23/90	ND	ND	ND	ND	ND	Yes	07323
BU611	02-NY-122-API	BOILER	F, PIPE RN	03/23/90	55	ND	ND	ND	55	Yes	07323
BU612	02-NY-122-API		F, RUN	03/23/90	ND	ND	ND	ND	ND	No	07323
BU613	02-NY-174-AFT	KITCHN	NF, GY, 12X12FT	03/23/90	5	ND	ND	ND	5	Yes	07323
BY342	02-NY-115-AFT	KITCHN	NF, GY, 12X12FT	03/23/90	4	ND	ND	ND	4	Yes	07323
BY343	02-NY-115-API	BOILER	F, PIPE INS	03/23/90	30	ND	ND	ND	30	No	07323
BY344	02-NY-115-API		F, PIPE RN	03/23/90	ND	ND	ND	ND	ND	No	07323
BY345	02-NY-121-AFT	KITCHN	NF, GY, 12X12FT	03/23/90	1	ND	ND	ND	1	Yes	07323
BY346	02-NY-121-AFT	KITCHN	NF, GY, 12X12FT	03/23/90	7	ND	ND	ND	7	No	07323
BY347	02-NY-121-AFT	KITCHN	NF, GY, 12X12FT	03/23/90	ND	ND	ND	ND	ND	Yes	07323
BY348	02-NY-121-ATD	GARAGE	F, TROWEL	03/23/90	ND	ND	ND	ND	ND	No	07323
BY349	02-NY-121-ATD	MECHRM	F, TRANSITE	03/23/90	ND	ND	ND	ND	ND	Yes	07323
BY350	02-NY-121-API	MECHRM	F, PIPE INS	03/23/90	35	ND	ND	ND	35	No	07323
BY351	02-NY-121-API	MECHRM	F, PIPE FIT	03/23/90	ND	ND	ND	ND	ND	No	07323
BY352	02-NY-121-API	OIL RM	F, PIPE INS	03/23/90	ND	ND	ND	ND	ND	No	07323
BY353	02-NY-122-AFT	KITCHN	NF, GY, 12X12FT	03/23/90	2	ND	ND	ND	2	Yes	07323
BY354	02-NY-122-AFT	KITCHN	NF, YL, 12X12FT	03/23/90	8	ND	ND	ND	8	No	07323
BY355	02-NY-122-AFT	KITCHN	NF, WH, 12X12FT	03/23/90	ND	ND	ND	ND	ND	No	07323
BY356	02-NY-122-AFT	ALLRMS	NF, GR, 12X12FT	03/23/90	1	ND	ND	ND	1	No	07323
BY357	02-NY-126-AFT	HALL	NF, GN, 12X12FT	03/23/90	1	ND	ND	ND	1	Yes	07323

* MATERIAL DESCRIPTION	FRIABLE ¹	COLOR ²	SYSTEM ³
Friable ¹ , Color ² , System ³ , Type	F - Friable NF - Non-Friable	BK - Black BL - Blue BR - Brown GR - Green GY - Gray RD - Red TN - Tan WH - White YL - Yellow	CHW - Chilled Water DOM - Domestic Water HHW - Heating Hot Water STM - Steam UNK - Unknown
** RESULTS			
CH - Chrysotile AM - Amosite CR - Crocidolite	OT - Other TL - Total		

Upon issue, this report may be reproduced only in full.

All analyses are performed in accordance with the methods set forth in U.S. EPA 600/M4-82-020, as ammended. Weston's Optical Microscopy Laboratory is accredited by the National Institute of Standards and Technology's National Voluntary Laboratory Accreditation Program for asbestos fiber analysis (Laboratory Code 1254).

BULK SAMPLE ANALYSIS SUMMARY

Weston W.O. No. 2104-13-01-0001

Receipt Date 03/23/90 through 03/23/90

AO LAB ID NO	CLIENT/CLIENT ID	LOCATION	MATERIAL DESCRIPTION *	DATE RECEIVED	RESULTS **					LAYERS	ANALYST
					CH	AM	CR	OT	TL		
BY358	02-NY-126-AFT	KITCHN	NF, GY, 12X12FT	03/23/90	1	ND	ND	ND	1	Yes	06806
BY359	02-NY-126-AFT	KITCHN	NF, GY, 12X12FT	03/23/90	1	ND	ND	ND	1	Yes	06806
BY360	02-NY-126-AFT	KITCHN	NF, GY, 12X12FT	03/23/90	ND	ND	ND	ND	ND	Yes	06806
BY361	02-NY-126-AFT	KITCHN	NF, GY, 12X12FT	03/23/90	2	ND	ND	ND	2	Yes	06806
BY362	02-NY-126-AFT	HALL	NF, GN, PATCH FT	03/23/90	ND	ND	ND	ND	ND	Yes	06806
BY363	02-NY-132-AFT	KITCHN	NF, GY, 12X12FT	03/23/90	2	ND	ND	ND	2	Yes	06806
BY364	02-NY-132-AFT	KITCHN	NF, GY, 12X12FT	03/23/90	1	ND	ND	ND	1	Yes	06806
BY365	02-NY-132-AFT	KITCHN	NF, BK, 9X9FT	03/23/90	1	ND	ND	ND	1	Yes	06806
BY366	02-NY-132-AFT	BEDRM	NF, GN, 12X12FT	03/23/90	1	ND	ND	ND	1	No	06806
BY367	02-NY-132-AFT	BEDRM	NF, GN, 12X12FT	03/23/90	1	ND	ND	ND	1	Yes	06806
BY368	02-NY-174-AFT	KITCHN	NF, WH, 12X12FT	03/23/90	2	ND	ND	ND	2	Yes	06806
BY369	02-NY-174-AFT	KITCHN	NF, BR, VINYL	03/23/90	ND	ND	ND	ND	ND	Yes	06806
BY370	12-NY-174-AFT	KITCHN	NF, GR, 12X12FT	03/23/90	1	ND	ND	ND	1	Yes	06806
BY371	02-NY-174-AFT	LIV RM	NF, GR, 12X12FT	03/23/90	ND	ND	ND	ND	ND	Yes	06806

* MATERIAL DESCRIPTION	FRIABLE ¹	COLOR ²		SYSTEM ³
Friable ¹ , Color ² , System ³ , Type	F - Friable NF - Non-Friable	BK - Black BL - Blue BR - Brown GR - Green GY - Gray	RD - Red TN - Tan WH - White YL - Yellow	CHW - Chilled Water DOM - Domestic Water HHW - Heating Hot Water STM - Steam UNK - Unknown
** RESULTS				
CH - Chrysotile AM - Amosite CR - Crocidolite	OT - Other TL - Total			

Upon issue, this report may be reproduced only in full.

All analyses are performed in accordance with the methods set forth in U.S. EPA 600/M4-82-020, as amended. Weston's Optical Microscopy Laboratory is accredited by the National Institute of Standards and Technology's National Voluntary Laboratory Accreditation Program for asbestos fiber analysis (Laboratory Code 1254).



ROY F. WESTON, INC.
1635 PUMPHREY AVE.
AUBURN, AL 36830
PHONE: (205) 826-6100
FAX: (205) 826-8232

Transmission Electron Microscopy
Asbestos Summary Report

Client: Argonne National Laboratories Weston W.O. No.: 2104-13-01-0000
Sample Type: Floor Tiles Sampling Location: Manhattan Beach

QUALITATIVE ANALYSIS

FLOOR TILES: A 0.5 to 2.0 gram portion of each floor tile sample was ultrasonically disaggregated in four milliliters of deionized, 0.2 μ m membrane filtered water. After the coarse fraction settled, a drop of the suspended, clay-sized fraction was placed on a Formvar coated 200 mesh Cu TEM grid and allowed to dry. The grid was carbon coated for thermal stability in the electron beam and examined with a Philips CM12 transmission electron microscope operating at 120 kilovolts accelerating voltage.

ANALYTICAL RESULTS

<u>SAMPLE IDENTIFICATION</u>	<u>RESULTS</u>
BY347-02-NY-121A-AFT	Positive
BY355-02-NY-122A-AFT	Positive
BY360-02-NY-126A-AFT	Positive
BY362-02-NY-126A-AFT	Negative
BY369-02-NY-174A-AFT	Negative
BY371-02-NY-174A-AFT	Positive

Barry Rayfield
(Approved for Transmittal)

4/24/90
(Date)

- * This test report relates only to the specific items tested.
- ** These sample results may only be reproduced in full, and are valid only if approved for transmittal.

APPENDIX B. TRANSFORMER OIL FIELD DATA

LN1595M-BEACH.RPT

Freeman

- cut power/potential problem with Schaal

Tony Pierro

- MANHATTAN BEACH STILL ON FOR MONDAY MORNING
- Springs Valley may be a problem, utility company needs 72 hrs notice!

FEBRUARY 26, 1990

MANHATTAN BEACH
FIRST THREE AT ROAD

TRANSFORMER
DIED

TRANSFORMERS
- OLD ONES
- ENTRANCE

ALLIS-CHAMBERS / 37.5 KVA

Serial #
1812297

Rusted Nameplate

GE 147A30

D 46946960 KVA

- IN MIDDLE
OF HOUSING
UNITS

1000 Arrived At site.

- FIRST 3 TRANSFORMERS AT ENTRANCE - INFO FROM NAMEPLATES OBTAINED.
- Second Set of 3 transformers in Filter units, info obtained
- TALKED WITH Basil Subcontractor, WAYNE BAUER. He said that the transformers were tested in the early 1980's

- All tra
PCB con

- We w

Verify

- cost es-
\$70,000

Mike P

- NOT THEN

Alex M

- Inform

Mike P

- JCP&L
Site =

- This w
Chin

- The re
the Po

- Frankl
Alex M

- Inform

Anger

- Schick
for t
AM

Freeman

- Schick

Blom with

For now on

system, utility
free!

0
CH
AP

rephr

#30

KCA

Trace - Info

Filter units,

for, Wayne
transformers
2051

- All transformers were found to be PCB contaminated.
- We went back to Fort Hamilton to verify records - No records were available
- Cost estimate for replacement (6) was \$70,000 (6K for disposal each alone)

Mike Prina

- Not there

Alex Munroe

- Informed him of today's events

Mike Prina

- JCP&L told Mike that the following sites are not to be sampled:

OLD Bridge

HOLMOEL

LIVINGSTON

- This was per JCP&L's Bob Esposito (Chief Electrical Engineer)

- The reason is that JCP&L owns the Poles & Transformers

- Franklin Lakes scheduled for Thursday 10 AM

Alex Munroe

- Informed him of the above.

Arjun MAGDA

- Scheduled Sheldon (tentatively) for Friday, this week, at 10:30 AM

Freeman

- Scheduled Spring Valley for